

REMARKS

Status of the Claims

Upon entry of the amendment above, claims 1-16 and 18-52 will remain pending, claims 1, 15, 46, and 50 being independent.

Summary of the Office Action

Claims 1, 3, 5-14, 29, 31,32, 36, 42, and 44 are rejected under 35 USC §103(a) as being unpatentable over European Patent Publication No. 0 575 130 (EP '130) in view of ELLIS (U.S. Patent No. 3,514,798) and MASTERS (U.S. Patent No. 4,681,060).

Claims 2 and 4 are rejected under 35 USC §103(a) as being unpatentable over EP '130 in view of ELLIS and MASTERS and further in view of WOJCIK (U.S. Patent No. 5,807,152).

Claims 15, 16, 18-28, 30, 33, 34, 35, 37-41, 43, and 45-52 are rejected under 35 USC §103(a) as being unpatentable over ITNYRE et al. (U.S. Patent No. 6,800,006) in view of ELLIS and MASTERS.

Response to the Office Action

A. Summary of the Amendment and Status of Rejections

In the amendment above, Applicants have amended paragraph 0001, as required by the Examiner, to reference U.S. Patent No. 6,736,689.

In each pending claim, Applicants have limited their invention to a **surfboard**, rather than "an aquatic gliding board."

The claims are rejected in three grounds, each comprising at least a combination of three references. Applicants have reviewed the bases upon which the references, in each case, have been combined and respectfully submit that one skilled in the art would not have found Applicants' invention to have been obvious at least for the following reasons. Accordingly, Applicants kindly request that the three grounds of rejection be reconsidered and withdrawn.

B. Withdrawal of §103 Rejections Based Upon EP '130, ELLIS and MASTERS

Before discussing the merits of the rejection, Applicants note that the beginning of Section 3, on page 2 of the Office action, states that claims 1, 3, 5-14, 29, 31, 32, 36, 42, and 44 are rejected as being rejected over EP '130 in view of ELLIS. However, in view of the comments near the middle of page 3 and the first two lines of the rejection set forth in Section 4, on page 6 of the Office action, this rejection is believed to be based upon EP '130, ELLIS, *and* MASTERS.

Applicants have reviewed the rejection and, in particular, the reasons advanced regarding why one skilled in the art would have been motivated to have modified the disclosure of EP '130 by means of teachings taken from ELLIS and MASTERS, and respectfully submit that one skilled in the art would not have found their claimed invention to have been obvious. Further, Applicants have reviewed the additional rejection of claims 2 and 4, based upon the same combination (*i.e.*, EP '130 + ELLIS + MASTERS) taken further with WOJCIK and, at least for the same reasons, Applicants submit that the invention of claims 2 and 4 would not have been obvious.

At least the following reasons are relevant as to why these two grounds of rejection should be withdrawn.

1. Rigid Partitions in the Prior Art

First, EP '130, ELLIS, as well as WOJCIK (the latter regarding the rejection of claims 2 and 4), disclose "standing" boards (such as surfboards) ***and they also disclose rigid partitions***, *viz.*, honeycomb structures in EP '130 and ELLIS, and an ABS structure in WOJCIK.

MASTERS, on the other hand, describes a "non-standing" watercraft which – allegedly – includes a "partition consisting essentially of foam." Actually, in an apparent

admission of a deficiency of MASTERS, vis-à-vis Applicants' invention, the Office action states, near the bottom of page 11, that Fig. 3B of MASTERS "discloses a partition which is **substantially** consisting essentially of foam" (emphasis added).

In spite of at least this particular difference, the rejections of Applicants' claims are premised upon one skilled in the art of "gliding boards" *intended to be stood upon*, as presently claimed, to adopt a particular feature of a "non-standing" watercraft, which adopted feature contradicts that feature which is embodied in all prior art of record for such "standing boards" and which feature goes against the knowledge of the person skilled in the art that the deck of such "standing boards" must sustain all the weight of the user/surfer and, therefore, must necessitate **more** support, rather than **less** support. (Note: As introduced by amendment herein, Applicants are willing to limit their field of endeavor further, from that of "gliding boards ... adapted to support a standing person during use ...", to that of **surfboards**.)

To adopt such feature, in spite of such contradiction, Applicants submit, the person skilled in the art would clearly need to be convinced of a strong motivation. Applicants further submit, the rejections do not meet the standard of obviousness necessary to sustain the rejections. Accordingly, Applicants request the rejections be withdrawn.

2. MASTERS' Fig. 3B Uses Foam for Different Reason – No Motivation

Second, the abstract of MASTERS explains that the invention is directed to the frame structure of a kayak having "a thin moment resisting web (A) having dimensional rigidity in a vertical direction ... surrounded by foam blocks (B) to provide dimensional rigidity in a lateral direction." The broadest claim of MASTERS parrots this description.

Therefore, the main component of the frame of MASTERS is a rigid web which is an essential feature of the frame.

Fig. 3B of MASTERS illustrates an embodiment in which a small amount of foam is located between the web and the hull. But the main purpose of that foam cushion is to resist abrading of the flexible skin of the hull. Such abrasion might occur due to the fact that, in the other embodiments, the hull would be directly in contact with the rigid web. Therefore, the foam cushion is here only as an accessory to the presence of the rigid web, to minimize one of the negative effects of the web, which remains an essential feature of that which is taught and suggested by MASTERS. Moreover, the abrasion may occur "when the kayak impacts boulders," a problem totally absent during surfing.

3. **"Consisting Essentially Of" Limitation Not Accorded Proper Significance**

Beginning near the top of page 21 of their previous reply (*i.e.*, that of June 20, 2005) Applicants discussed the limitation that appears in independent claim 1 (as well as in claims 34 and 46, both rejected over the combination of ITNYRE, ELLIS, and MASTERS, addressed below).

Applicants have reviewed the Examiner's response to this discussion, which response begins near the bottom of page 11 of the Office action, and respectfully submit that the limitation has not been accorded the significance that it is due.

a. **"Substantially' Consisting Essentially Of" is Not Claimed**

In this regard, Applicants initially question the relevance of the statement, on page 11 of the Office action, three lines from the bottom of the page, that "Masters in figure 3B discloses a partition which is **substantially** consisting essentially of foam B" (emphasis added), as well as the relevance of the statement, on page 13, line 14 of the Office action, that "[t]he partition in figure 3B of Masters also is for the most part foam such that it is **almost** consisting essentially of foam" (emphasis added), and that of the statement,

on page 12, lines 17-18 of the Office action, that “[i]n figure 3B of Masters the partition consist essentially of *for the most part* foam.”

Applicants claim none of these limitation: “substantially” consisting essentially of foam or “almost” consisting essentially of foam, or consisting essentially “for the most part” foam. The addition of the qualifier “substantially,” “almost,” and “for the most part,” Applicants submit, takes the expression outside the realm of the well-recognized meaning of the transitional phrase “consisting essentially of” and into the realm of ambiguity, while failing to meet a limitation of Applicants’ claimed invention.

In any event, in view of MASTERS’ failure to teach or suggest a partition that “consists essentially of foam,” which is what Applicants claim, Applicants request that the rejections based upon the disclosure of MASTERS be withdrawn.

b. “Consisting Essentially Of” Does Not Mean “Comprising”

Further, and also appearing on page 11 of the Office action in connection with the “consisting essentially of” limitation, is the declaration by the Examiner that “[c]onsisting essentially of” will be construed as ‘comprising’ absent a clear indication in the specification or claims of what the basic and novel characteristics actually are.”

Applicants submit there is neither precedent nor logic to construing the expression differently than its ordinary and accustomed meaning.

In the event, the Examiner here is merely inviting Applicants to provide antecedent basis for the expression, Applicants have herein introduced an amendment to the paragraph 0064 of the specification. Accordingly, by giving Applicants’ claims the interpretation/construction consistent with the well-recognized meaning of the expression “consisting essentially of,” Applicants submit that the rejections based upon MASTERS

should be withdrawn.

If, on the other hand, the Examiner's comment (*i.e.*, "[c]onsisting essentially of" will be construed as 'comprising' absent a clear indication in the specification or claims of what the basic and novel characteristics actually are") is not merely an invitation to amend the specification, Applicants additionally traverse the construction of Applicants' claims (*i.e.*, additional to the questionable "substantially" qualifier, mentioned above) because the "consisting essentially of" expression itself is **part of** the "indication in the ... claims of what the basic and novel characteristics" of the invention. That is, as explained by Applicants in the second paragraph on page 22 of their previous reply, to the extent that any component of a longitudinal partition of an aquatic board (or surfboard), in addition to the claimed foam, would include a component that would materially provide support for the weight of a user during the use of the board, such aquatic board (or surfboard) would be outside the scope of the invention. For example, to the extent that layers 13, 14 in the embodiment shown in Fig. 7 would be structural layers like the inner shell 7 or 10, *e.g.*, such embodiment would not be encompassed by the invention of claim 1.

Therefore, Applicants submit, the expression "consisting essentially of" should be construed according to its well-recognized meaning, rather than as "comprising."

c. MASTERS Partition Does Not Consist Essentially Of Foam

The frame of Fig. 3B of MASTERS, in the context of the entirety of the disclosure of MASTERS, is not essentially made of foam. In MASTERS, the web member A is essential, the lateral foam B (providing lateral rigidity) is essential, but the foam cushion of Fig. 3B would not, Applicants submit, be considered essential to one skilled in the art. In this regard, the rejections that rely upon MASTERS (*i.e.*, all rejections) are premised upon column 3, lines 45-47 of the specification of MASTERS, which explains that the bridge

cushion “reduces impact forces on thin web member A’” This shows that, according to MASTERS, the bridge cushion only exists in the context of a thin web member. That is, the partition of MASTERS consists essentially of ***more than the foam/bridge cushion***.

4. Neither EP ‘130 Nor ELLIS Disclose a “Sheet of Foam”

Applicants’ claim 1 specifies “an upper half-shell comprising “a sheet of foam having downwardly curved side walls”

Page 3, lines 6-7 of the Office action include the assertion that, when EP ‘130 is combined with ELLIS, “the upper and lower shell would comprise ***a sheet of foam***” (emphasis added).

Applicants respectfully disagree.

A sheet of material is, by essence, *continuous*, whereas foam particles that fill honeycomb cells (*i.e.*, EP ‘130 + ELLIS) would be discontinuous, *i.e.*, there would be discontinuities between individual foam particles and discontinuities in the form of the walls the cells situated between groups of foam particles.

Accordingly, the rejection of claim 1 should be withdrawn for this additional reason.

5. No Reason to Fill Cells of EP ‘130 with Compressible Foam

Beginning on page 4, line 16, the rejection of claims 9-13 appears to be based upon the asserted conclusion that “it would have been obvious ... to use as the foam filling the cells of the honeycomb core of EP 130 polypropylene foam”

Applicants respectfully disagree.

ELLIS explains (column 2, lines 20-21) that filling the honeycomb with foam particles is done “for increasing the strength in any weaker parts of the surf-board.” In such a case, one skilled in the art would certainly use ***rigid*** foam (perhaps, such as

expanded polystyrene) rather than a **compressible** foam. Moreover, Applicants question the benefit, in terms of strength, one skilled in the art would foresee in filling a honeycomb structure, which is **rigid**, with **compressible** foam particles. Applicants respectfully submit, the rejection here can only be based upon an improper hindsight reconstruction of Applicants' invention.

6. "Cushioning" is Different From "Deflection"

Sections 10, 11, and 13, on pages 12-14 of the Office action, assert that "deflection" of a deck and "cushioning" are desirable. Applicants respectfully submit that the two concepts are not the same and equating them is not supported.

For example, a typical rigid church bell can vibrate perfectly, because that is what it is designed to do. On the other hand, deflecting it quite different, even if one were to use his foot.

C. Withdrawal of §103 Rejection Based Upon ITNYRE, ELLIS and MASTERS

In addition to the rejection of claims 1 and its dependents, Applicants request that the rejection of independent claims 15, 46, 50, and their dependents, based upon the combination of ITNYRE, ELLIS, and MASTERS, be withdrawn.

Independent claim 15 is directed to an aquatic board in which Applicants call for at least one partition to comprise "a polymeric foam material having a compressible elasticity or viscoelasticity to provide said deck with an ability to deflect downwardly under pressure exerted by a foot of a user on said deck relative to said hull and to cause said deck to recover from said deflection upon cessation of said pressure exerted by the foot."

According to Applicants' invention, the use of elastic foams (as specified in claim 15, for example) enable a surfer, while riding his/her surfboard, to benefit from a downward deflection of the top of the board, viz., the upper half-shell or deck, relative to

the lower half-shell or hull, thereby giving the board an increased liveliness, as mentioned in paragraphs 0015 and 0063-0065 of Applicants' specification.

1. No Disclosed Deflection of ITNYRE's Board Relative to Hull

The sentence bridging pages 7 and 8 of the Office action includes the statement that "the deck of Itnyre et al already has the ability to deflect downwardly under pressure exerted by a foot of a user as the deck can vibrate."

Applicants submit that Applicants' limitation pertaining to "deflection," when the claims are construed in light of Applicants' specification, differs from the "vibration" of ITNYRE's surfboard. In this regard, both ITNYRE and MASTERS want to impart rigidity to their respective crafts. This is contrary to allowing **deflection** of the deck under the foot.

Vibrations in ITNYRE would relate to rapid cycles of tiny up and down movements, whereas the pressure of the foot that would cause a deflection would last a much longer period, and whereas the result of such pressure would be a significant displacement. This would be basically similar to the difference between what occurs in a drum and what occurs in a trampoline. In a drum, vibration causes noise, while, in a trampoline, deflection causes a spring-back effect. In this sense, **vibration**, as with ITNYRE, differs from **deflection**, as with Applicants' claimed invention.

2. No Disclosed Downward Deflection of MASTERS' Deck

Applicants respectfully disagree with the comment on page 8, second paragraph of the Office action, which asserts that MASTERS discloses the deck of his kayak flexes downward.

This is not taught or suggested by MASTERS.

As mentioned above, column 3, lines 45-47 of MASTERS states that the bridge cushion is useful when the kayak impacts boulders. In such case, it is the hull which would deflect upward and not the deck downwards.

Moreover, in MASTERS the deck is always in direct contact with the rigid web, the latter "having dimensional rigidity in a vertical direction," the two elements forming a T-shaped structure inherently being rigid. Therefore, the deck is not likely to deflect downwards and is not disclosed by MASTERS to deflect downwards.

In addition, Applicants disagree with the assertion in the third paragraph of page 8 of the Office action that MASTERS discloses the use of an elastic foam. Both MASTERS and ITNYRE discuss absorbing vibrations or shocks, never providing for giving back stored energy, which is what an elastic foam is intended to do.

3. Use of Polypropylene Foam Not Obvious

Applicants include claims relating to the use of a polypropylene foam and, in particular, an expanded polypropylene foam. This is a particular material which is not identified by the prior art of record as suggesting its use in the combination relied upon in the rejections of Applicants' claims. Further, its use would not have been obvious to one skilled in the art, as asserted on page 9, three lines from the bottom, to page 10, line 6, and on page 12, Section 8, of the Office action. Applicants' specification, beginning with paragraph 0067, provide reasons why such material achieves objects of Applicants' invention, not taught or suggested by the prior art of record.

That is, Applicants have given reasons why the specific material they use has advantages not recognized in the context of the invention. That is, contrary to the assertion made on page 12 of the Office action, Applicants' use of polypropylene foam in Applicants' claimed invention is not simply for ***cushioning***. Rather, it is used in specific

locations of an aquatic gliding board/surfboard, to achieve advantages not recognized by the prior art.

Further, as discussed above, “characteristics desirable for use as a filler in the honeycomb cores of Itnyre et al.,” as mentioned on page 10, lines 4-5 of the Office action, are not relevant to the claimed invention, particularly when the honeycomb structure of ITNYRE provides for a rigid structure, which would not be affected to achieve Applicants’ invention.

4. All of Foam of Prior Art Not Continuous in Height and Width

Applicants’ claim 32 calls for “all of said foam” of the partition to be continuous along a height and along a width of the partition. By contrast, MASTERS includes an essential, vertically rigid web A which causes a discontinuity for the foam B’ (and for the foam B and D).

5. Invention of Claim 50 Not Met by Prior Art of Record

The end of independent claim 50 includes the limitation “said longitudinal partition further comprising no additional structural element extending along at least a majority of said height of said inner cavity.” By contrast, the vertical partition of the kayak of MASTERS includes the rigid web A, A’, in addition to the foam B, B’.

6. “Consisting Essentially Of” Not Accorded Proper Significance

As explained above in connection with the rejection of claim 1, Applicants submit that the rejection of claims 34 and 46, both of which include a limitation of a longitudinal partition consisting “essentially of foam,” should be withdrawn inasmuch as the rejection, whether based upon the combination of EP ‘130, ELLIS, and MASTERS, or upon the combination of ITNYRE, ELLIS, and MASTERS, fails to accord significance to the expression “consisting essentially of.”

SUMMARY AND CONCLUSION

The grounds of rejection advanced in the Office action have been addressed and are believed to be overcome. Reconsideration and allowance are respectfully requested in view of the amendment and remarks above.

A check is enclosed for payment of a fee for an extension of time. No additional fee is believed to be due at this time. However, the Commissioner is authorized to charge any fee required for acceptance of this reply as timely and complete to Deposit Account No. 19-0089.

Further, although an extension of time for one month is believed to be necessary at this time, if it were to be found that an additional extension of time were necessary to render this reply timely and/or complete, Applicants request an extension of time under 37 CFR §1.136(a) in the necessary increment(s) of month(s) to render this reply timely and/or complete and the Commissioner is authorized to charge any necessary extension of time fee under 37 CFR §1.17 to Deposit Account No. 19-0089.

Any comments or questions concerning this application can be directed to the undersigned at the telephone or fax number given below.

Respectfully submitted,
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November 7, 2005
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